Transportation Asset Management International Scanning Tour

Australia

Basic facts
http://www.cia.gov/cia/publications/factbook/geos/as.html

Victoria VicRoads – Melbourne, Victoria (Wednesday, April 13)

Background

http://www.vicroads.vic.gov.au/ (homepage)

Corporate Plan 2002-2004
http://www.vicroads.vic.gov.au/vrne/vrnav.nsf/childdocs/-F9A9D2349F5D34B7CA256EC900145089-56612C38C1EE67EECA256EC900145096-0B08382193B6EC42CA256BCE00820C5E?open (homepage for corporate plan)

http://www.vicroads.vic.gov.au/vrpdf/corp/Corporateplan02.pdf (pdf file)

Presentations

Welcome to VicRoads - David Anderson – Chief Executive VicRoads

Overview of Asset Management - Bruce Van Every – General Management, Road System Management

Asset Management - Ken Russell – Manager, Asset Management

Pavement Asset Management - Jamie Favaloro (and Ian Cossens) – Pavement Management Systems Engineers

Observations

Facts:

- 228,0000 sq km
- Most densely populated state
- 4.8 million population
- 3.4 million people are in Melbourne
- 4.1 million registered motor vehicles
- 3.3 million licensed drivers
- 155,000 km of roads in Victoria – VicRoads responsible for about 22,000 kms – valued at $11b (US)
- Annual program budgets $650 m (US)
- Revenues $1.9 b (US)

VicRoads is the State road and traffic authority for Victoria
Purpose: To serve the community by managing the Victoria road network and its use as an integral part of the overall transport system.

Organizational Structure

- Statutory Authority
  - Roads Corporation (VicRoads) established under the Transport Act 1983
  - Chief Executive the sole member of the corporation, reports to the Minister for Transport
  - Administers the Road Safety Act 1986
- Core businesses (each with a general manager)
  - Road System Management (Bruce Van Every)
  - Road Safety
  - Traffic and Transport Integration
  - Registration and Licensing

Critical issues

- What
  - Increase in the transportation task
  - Metropolitan travel and accessibility
  - Aging infrastructure
  - Rising environmental and community expectations
  - Challenge to produce a global optimum where individuals seek to maximize their own utility
- How
  - Focus on Risk Management. (e.g. grass cutting is irrelevant to preservation but important of aesthetics)
  - Simple rules – stitch in time (e.g. resurfacing life is 10 years so need to do 10% of the network every 10 years)
  - Use of pavement management (HDM-4)

Asset Management Goal
Our purpose is to deliver social, economic and environmental benefits to communities throughout Victoria by managing the Victorian road network and its use as an integral part of the overall transport system.

Road Management Act (July 1, 2004)

- Requirement to
  - Inspect
  - Maintain
  - Repair
- For asset management

- Register of Public Roads (required) – lists roads on which they are accepting responsibility, agreements, other issues of relevance to the community. Available on the web.
- Road Management Plan (optional)
    - VicRoads has developed (available at www.vicroads.vic.gov.au)
        - One page plan plus 2 schedules
            - A – Road Infrastructure Management System
            - B - Road Maintenance Standards (focus on safety – what is a hazard -- otherwise used guidelines and advice) – by road maintenance categories
                - Definition of hazards
                - Inspection frequency
                - Nominate response times

Pavement Management Strategy – "Stitch in Time" ($164m)

- Sets targets based on user acceptance and economic efficiency
    - Community – roughness
        - Rough - <3%, IRI > 5.33
        - Moderately rough - <10%, IRI >4,2
    - Road managers – roughness and cracking
    - Priorities
        - Routine maintenance ($41m) – safety and minimize pavement deterioration
        - Periodic maintenance ($56m) – waterproofing and deferring rehabilitation (Maintenance guidelines indicate coverage –e.g 7-8% for sprayed seal network, 5-6% for the asphalt network.)
        - Pavement rehabilitation ($67m) – minimize whole of life pavement costs, and provide acceptable ride quality & reduce user costs. (Maintenance guidelines indicates 0.5-1..5% of the network with IRI thresholds.) Consideration also given to major patching and regulation, social equity, freight and drainage issues.

Southern and Eastern Integrated Transport Authority (SEITA) - Thursday, April 14, 2005

Background

SEITA is a corporation formed by the state to serve as the tolling authority for Victoria. The first tollroad – CityLink is now operated by TransUrban who reports to VicRoads. The presentation by SEITA focused on the asset management aspects of both CityLink and the new road currently under construction EastLink.

http://www.seita.com.au/html2/home/home/index.htm

Presentations

Ken Mathers, Chief Executive Officer and staff

Observations

CityLink - background

- 22kms (from airport to city and then east) fully automated toll road.
- Long history – began with detailed environmental studies
- High costs/ economic downtown
- 1992 Government review
- Special Purpose authority
    - Road would be a toll road
    - reports to minister and the Department of Infrastructure
    - focus on electronic tolling
- 1994-1996 – bidding process (first major public private partnership project in Australia)
- Operated by concession - TransUrban

EastLink

- 30 kms (east of the city) - $3.5 b with financing – includes 17 interchanges and tunnels
- Long history (began 40 years ago, VicRoads slowly acquiring land)
- Numerous environmental studies
- High costs/ stalled project
- Business case 2002-03
- PPP and toll road – Mitchum-Franston freeway project
- SEITA established
- 2003-2004 bidding process

Asset management is specified in the concession deed and the technical requirements. More detail is included in the EastLink project after experience with CityLink. The Concession Deed specifies

- Risk allocation
    - State free to upgrade roads
    - No requirement for road restrictions
    - 39 year concession period (5 months into it!)
    - Road operation and traffic management
    - Maintain, operate and promptly repair
    - Minimize disruption
    - Best practice and continuous improvement
    - Comply with technical standards
    - Handover requirements

        - Condition inspections
        - No defects
    - Commercial securities

The technical requirements specify:

- Design life and residual design life
- Maintenance obligations for routine, planned refurbishment, unplanned intervention and repair, inspections, develop, maintain and update AMS and code of maintenance standards, records and reporting.
- The need for an AMS – inventory, records, reporting, location referencing, accessible to state (including real time access for electronic systems)
- Defined activities and levels in the bid.
- Code of Maintenance Standards
    - Performance standards
    - Intervention standard
    - Inspection procedure and plans
    - Defect risks and remedial actions
    - Condition monitoring
    - Records and reporting
- Planned Maintenance Schedule (bid by ConnectEast)
- Planned Replacement and Refurbishment Schedule (bid)
- Capture commitment to maintain and repair up front.

Also added Key Performance Indicators (KPIs):

- Monthly scoresheet – quarterly report
- $15m credits for customers for non-compliance (indexed and after ramp-up
- Service areas are:
    - Customer service
    - Road condition
    - Landscaping and features
    - Tolling accuracy
    - Environment (water quality runoff and air quality in tunnels)

TransUrban

Background

http://www.transurban.com.au

Presentations

Zoltan Maklary – Manager Infrastructure
Glen Sanders – Assets and Maintenance Manager

Observations

TransUrban operates and maintains the CityLink system Assets include structures, roads, tunnels, drainage, mechanical, electrical, ITS and architectural features. Aim is to do

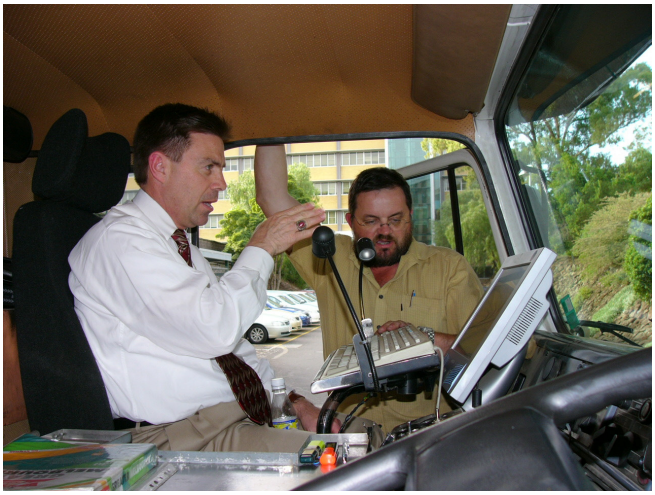
strategic asset management to set work plans, and maximize asset life for the lowest possible cost. Use proprietary infrastructure management tools.

Pictures

David Anderson (Chief Executive Officer – VicRoads), Dave Geiger (FHWA) and Paul Wells (NYSDOT)

Bruce Van Avery, Mike Meyer, Jamie Favaloro, Paul Wells – engaged in panel discussion

VicRoads SCRIM


Lacy Love (North Carolina) makes sure he understand the SCRIM's features

The team with Manoli Loukas from VicRoads
Back row: Jake Almbourg, Manoli Loukas, Mike Meyer, Larry Velasquez, Dennis Merida, Dave Geiger, Paul Wells,
From row: Particia Bugas-Schramm, Don Tuggle, Sue McNeil, Lacy Love, Rob Ritter, Kirk Steudle

TransUrban operations control room for CityLink, Melbourne

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